

Title (en)
ABNORMALITY DIAGNOSTIC DEVICE AND METHOD OF CELL BALANCING CIRCUITS

Title (de)
VORRICHTUNG UND VERFAHREN ZUR DIAGNOSE VON ANOMALIEN BEI ZELLENAUSGLEICHSSCHALTkreISEN

Title (fr)
DISPOSITIF DE DIAGNOSTIC D'ANOMALIE ET PROCÉDÉ POUR CIRCUITS D'ÉQUILIBRAGE D'ÉLÉMENTS

Publication
EP 2544013 A4 20130731 (EN)

Application
EP 10847086 A 20100823

Priority
• KR 20100019924 A 20100305
• KR 2010005583 W 20100823

Abstract (en)
[origin: US2011285538A1] Provided are an apparatus and a method for diagnosing an abnormality in a cell balancing circuit. The apparatus may include a plurality of cell balancing circuits respectively connected to a plurality of battery cells included in a battery pack for balancing the voltages of the battery cells, a diagnosis resistor respectively installed between the cell balancing circuit and a cathode terminal and an anode terminal of the corresponding battery cell, a voltage measuring unit for measuring a voltage difference of the balancing circuit corresponding to each of the battery cells, and a control unit for turning on or off a cell balancing circuit to be diagnosed and for determining whether there is an abnormality in the cell balancing circuit to be diagnosed, based on a variation pattern of a voltage difference of a cell balancing circuit adjacent to the cell balancing circuit to be diagnosed that is measured by the voltage measuring unit.

IPC 8 full level
G01R 31/02 (2006.01); **G01R 19/00** (2006.01); **G01R 31/00** (2006.01); **G01R 31/28** (2006.01); **G01R 31/36** (2006.01); **H02J 7/00** (2006.01); **H02J 7/02** (2016.01)

CPC (source: EP US)
G01R 31/28 (2013.01 - EP US); **G01R 31/396** (2018.12 - EP US); **H02J 7/0016** (2013.01 - EP US); **Y02T 10/70** (2013.01 - EP US)

Citation (search report)
• [AD] JP 2007085847 A 20070405 - HITACHI VEHICLE ENERGY LTD
• [A] EP 1603212 A2 20051207 - MOTOROLA INC [US]
• [A] JIAN CAO ET AL: "Battery balancing methods: A comprehensive review", VEHICLE POWER AND PROPULSION CONFERENCE, 2008. VPPC '08. IEEE, IEEE, PISCATAWAY, NJ, USA, 3 September 2008 (2008-09-03), pages 1 - 6, XP031363349, ISBN: 978-1-4244-1848-0
• See references of WO 2011108788A1

Cited by
CN110637390A

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
US 2011285538 A1 20111124; US 8902072 B2 20141202; CN 102884438 A 20130116; CN 102884438 B 20160302; CN 104931841 A 20150923; CN 104931841 B 20180102; EP 2544013 A1 20130109; EP 2544013 A4 20130731; EP 2544013 B1 20150325; EP 2730933 A1 20140514; EP 2730933 B1 20180418; JP 2012255788 A 20121227; JP 2012515354 A 20120705; JP 5101748 B2 20121219; JP 5356579 B2 20131204; KR 101256952 B1 20130425; KR 20110100863 A 20110915; WO 2011108788 A1 20110909

DOCDB simple family (application)
US 201113195578 A 20110801; CN 201080066551 A 20100823; CN 201510239038 A 20100823; EP 10847086 A 20100823; EP 14151199 A 20100823; JP 2012143313 A 20120626; JP 2012503342 A 20100823; KR 20100019924 A 20100305; KR 2010005583 W 20100823